

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

Facility Equipment and Requirements (Section D)

This section consists of a table listing all permitted equipment at the facility, facility wide requirements, all individual Permits to Construct and Permits to Operate issued to various equipment at the facility, and Rule 219-exempt equipment subject to source-specific requirements. Each permit and Rule 219-exempt equipment will list operating conditions including periodic monitoring requirements, and applicable emission limits and requirements that the equipment is subject to. Also included is the rule origin and authority of each emission limit and permit condition.

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

PERMITTED EQUIPMENT LIST

THE FOLLOWING IS A LIST OF ALL PERMITS TO CONSTRUCT AND PERMITS TO OPERATE AT THIS FACILITY:

Application number	Permit to Operate number	Equipment description
508654		ICE (>500HP) LANDFILL GAS

NOTE: EQUIPMENT LISTED ABOVE THAT HAVE NO CORRESPONDING PERMITS TO OPERATE NUMBER ARE ISSUED PERMITS TO CONSTRUCT. THE ISSUANCE OR DENIAL OF THEIR PERMITS TO OPERATE IS SUBJECT TO ENGINEERING FINAL REVIEW. ANY OTHER APPLICATIONS THAT ARE STILL BEING PROCESSED AND HAVE NOT BEEN ISSUED PERMITS TO CONSTRUCT OR PERMITS TO OPERATE WILL NOT BE FOUND IN THIS TITLE V PERMIT.

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

FACILITY WIDE CONDITION(S)

Condition(s):

1. EXCEPT FOR OPEN ABRASIVE BLASTING OPERATIONS, THE OPERATOR SHALL NOT DISCHARGE INTO THE ATMOSPHERE FROM ANY SINGLE SOURCE OF EMISSIONS WHATSOEVER ANY AIR CONTAMINANT FOR A PERIOD OR PERIODS AGGREGATING MORE THAN THREE MINUTES IN ANY ONE HOUR WHICH IS:
 - A. AS DARK OR DARKER IN SHADE AS THAT DESIGNATED NO. 1 ON THE RINGLEMANN CHART, AS PUBLISHED BY THE UNITED STATES BUREAU OF MINES; OR
 - B. OF SUCH OPACITY AS TO OBSCURE AN OBSERVER'S VIEW TO A DEGREE EQUAL TO OR GREATER THAN DOES SMOKE DESCRIBED IN SUBPARAGRAPH (A) OF THIS CONDITION.
[RULE 401]
2. THE OPERATOR SHALL NOT USE LANDFILL GAS CONTAINING SULFUR COMPOUNDS IN EXCESS OF 150 PPMV CALCULATED AS HYDROGEN SULFIDE AVERAGED DAILY.
[RULE 431.1]
3. THIS FACILITY IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

GASEOUS EMISSIONS: 1150.1
GASEOUS EMISSIONS: 40CFR63 SUBPART AAAA
GASEOUS EMISSIONS: 40CFR60 SUBPART WWW

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

PERMIT TO OPERATE

**Permit No.
A/N 508654**

Equipment Description:

RESOURCE RECOVERY SYSTEM NO. 1 CONSISTING OF:

1. INTERNAL COMBUSTION ENGINE NO. 1, DEUTZ, MODEL TBG620V16K, SIXTEEN CYLINDER, 1850 BHP, LEAN BURN, LANDFILL GAS FIRED, TURBOCHARGED AND INTERCOOLED DRIVING AN ELECTRICAL GENERATOR.
2. RADIATOR WITH FANS.
3. ANCILLARY SKID WITH MUFFLER, HEAT EXCHANGER, FILTER, INTERCOOLER AND EXHAUST STACK.

Conditions:

- 1) OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
[RULE 204]
- 2) THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
[RULE 204]
- 3) OPERATION OF THIS EQUIPMENT SHALL NOT RESULT IN THE EMISSION OF RAW LANDFILL GAS TO THE ATMOSPHERE.
[RULE 1150.1]
- 4) A SAMPLING PORT SHALL BE INSTALLED IN THE LANDFILL GAS LINE TO THE ENGINE TO ALLOW THE COLLECTION OF A GAS SAMPLE.
[RULE 431.1]
- 5) A FLOW INDICATING AND RECORDING DEVICE SHALL BE INSTALLED IN THE LANDFILL GAS SUPPLY LINE TO THE ENGINE.
[RULE 1303(b)(2)-OFFSETS]
- 6) THE HEATING VALUE OF LANDFILL GAS BURNED IN THIS ENGINE SHALL NOT EXCEED 18.2 MMBTU/HR, BASED ON A 1-HOUR AVERAGE. THE LANDFILL GAS FLOW RATE TO THE ENGINE, THE METHANE CONTENT OF THE LANDFILL GAS AND THE GROSS ELECTRICAL OUTPUT (KW) SHALL BE MEASURED EVERY 15-MINUTES. THE HEATING VALUE OF THE LANDFILL GAS SHALL BE CALCULATED BY TWO METHODS:

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

METHOD 1:

(MEASURED METHANE VOLUME FRACTION) X (MEASURED FLOW RATE) X (1,010 BTU/SCF)

METHOD 2:

(MEASURED GROSS KW OUTPUT) X (14,407 BTU/KW-HR)

THE OPERATOR SHALL KEEP A LOG OF THE AVERAGE HOURLY HEATING VALUE OF THE LANDFILL GAS BURNED, CALCULATED BY BOTH METHODS. THE OPERATOR SHALL INDICATE IN THE LOG THE METHOD USED TO DETERMINE COMPLIANCE.

[RULE 1303 (b)(2)-OFFSETS]

- 7) THE OPERATOR SHALL INSTALL AND MAINTAIN A NON-RESETTABLE ELAPSED TIME METER TO ACCURATELY INDICATE THE ELAPSED OPERATING TIME OF THE ENGINE.
[RULE 1110.2]
- 8) THE ENGINE SHALL ONLY USE LANDFILL GAS AS A FUEL.
[RULE 204]
- 9) THE OPERATOR SHALL KEEP A MONTHLY OPERATING LOG THAT INCLUDES:
 - A. TOTAL HOURS OF OPERATION.
 - B. TOTAL CUBIC FEET OF LANDFILL GAS CONSUMED.
 - C. CUMULATIVE HOURS OF OPERATION SINCE THE LAST SOURCE TEST.[RULE 1110.2]
- 10) THE OPERATOR SHALL REPORT ANY BREAKDOWN RESULTING IN EMISSIONS IN EXCESS OF RULE OR PERMIT LIMITS PER THE REQUIREMENTS OF SCAQMD RULE 1110.2.
[RULE 1110.2]
- 11) TWO SAMPLING PORTS MUST BE PROVIDED IN THE ENGINE EXHAUST DUCT, 8-10 DUCT DIAMETERS DOWNSTREAM AND TWO DUCT DIAMETERS UPSTREAM OF ANY FLOW DISTURBANCE, AND SHALL CONSIST OF TWO 4 INCH WELD NIPPLES WITH PLUGS, 90 DEGREES APART. AN EQUIVALENT METHOD FOR EMISSION SAMPLING MAY BE USED UPON APPROVAL OF THE AQMD. ADEQUATE AND SAFE ACCESS TO THE TEST PORTS MUST BE SUPPLIED BY THE APPLICANT.
[RULE 217]
- 12) APPLICANT SHALL CONDUCT AN ANNUAL PERFORMANCE TEST OF THE ENGINE IN ACCORDANCE WITH AQMD TEST PROCEDURES AND FURNISH THE AQMD A WRITTEN RESULT OF SUCH PERFORMANCE TEST. WRITTEN NOTICE OF THE PERFORMANCE TEST SHALL BE PROVIDED TO THE AQMD 10 DAYS PRIOR TO THE TEST SO THAT AN OBSERVER MAY BE PRESENT. A TEST PROTOCOL SHALL BE SUBMITTED FOR APPROVAL AT LEAST 60 DAYS PRIOR TO TESTING.

THE PERFORMANCE TEST SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO A TEST OF THE INLET AND EXHAUST GASES, FOR THE FOLLOWING:

- A. METHANE
- B. TOTAL NON-METHANE HYDROCARBONS
- C. OXIDES OF NITROGEN (EXHAUST ONLY)
- D. CARBON MONOXIDE (EXHAUST ONLY)

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

- E. PARTICULATES (EXHAUST ONLY)
 - F. TOTAL SULFUR COMPOUNDS AS H₂S (INLET ONLY)
 - G. FLOW RATE
 - H. OXYGEN
 - I. NITROGEN
 - J. CARBON DIOXIDE
 - K. MOISTURE
 - L. TEMPERATURE
 - M. TOXIC AIR CONTAMINANTS INCLUDING BENZENE, CHLOROBENZENE, 1,2-DICHLOROETHANE, 1,1-DICHLOROETHANE, DICHLOROMETHANE, TETRACHLOROETHYLENE, TETRACHLOROMETHANE, TOLUENE, 1,1,1-TRICHLOROETHANE, TRICHLOROETHYLENE, TRICHLOROMETHANE, VINYL CHLORIDE AND XYLENES (EXHAUST ONLY).
 - N. GROSS ELECTRICAL POWER OUTPUT
 - O. ENGINE HOUR-METER READING
- [RULE 1110.2, 1150.1, 218, 1303(a)(1)-BACT, 1303(b)(2)-OFFSETS, 1401]

- 13) THE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED THE FOLLOWING:

AIR CONTAMINANT	LBS/HR
REACTIVE HYDROCARBONS	3.27
NITROGEN OXIDE	2.44
SULFUR DIOXIDE	0.75
CARBON MONOXIDE	10.2
PARTICULATES	0.32

[RULE 1303(b)(2)-OFFSETS]

- 14) REACTIVE HYDROCARBON EMISSIONS FROM THE ENGINE SHALL NOT EXCEED 391 PPMV AS METHANE, WITH NO OXYGEN CORRECTION.
[RULE 1303(a)(1)-BACT]
- 15) OXIDES OF NITROGEN EMISSIONS FROM THE ENGINE SHALL NOT EXCEED 102 PPMV, WITH NO OXYGEN CORRECTION.
[RULE 1303(a)(1)-BACT]
- 16) CARBON MONOXIDE EMISSIONS FROM THE ENGINE SHALL NOT EXCEED 697 PPMV, WITH NO OXYGEN CORRECTION.
[RULE 1303(a)(1)-BACT]
- 17) A CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) SHALL BE INSTALLED AND OPERATED TO MEASURE THE ENGINE EXHAUST CONCENTRATION FOR NOX AND O₂ ON A DRY BASIS. IN ADDITION, THE SYSTEM SHALL CONVERT THE ACTUAL NOX CONCENTRATION TO A CORRECTED NOX CONCENTRATION AT 15% O₂. THIS MONITORING SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF AQMD RULE 218. PRIOR TO INSTALLATION, THIS MONITORING SYSTEM SHALL BE APPROVED IN WRITING BY THE AQMD.
[RULE 218, 1110.2]

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

- 18) ALL RECORDS, SUCH AS MONTHLY OPERATING LOG, GROSS ELECTRICAL POWER OUTPUT, MAINTENANCE RECORDS AND PERFORMANCE TEST RESULTS, SHALL BE MAINTAINED FOR FIVE YEARS AND MADE AVAILABLE TO AQMD PERSONNEL UPON REQUEST.
[RULE 1150.1, 1303(b)(2)-OFFSETS]
- 19) THIS ENGINE SHALL NOT BE OPERATED IN SUCH A MANNER AS TO UNREASONABLY INTERFERE WITH THE OWNER'S/OPERATOR'S ABILITY TO COMPLY WITH AQMD RULE 1150.1 OR ANY OTHER AQMD RULE LIMITING LANDFILL GAS MIGRATION OR SURFACE EMISSIONS.
[RULE 1150.1]

Emissions and Requirements:

- 20) THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATIONS:

NMOC: 20 PPMV AS HEXANE @ 3% O₂ OR 98% WEIGHT REDUCTION, RULE 1150.1, 1303(a)(1)-
BACT, 40CFR60 SUBPART WWW, 40CFR63 SUBPART AAAA
VOC: 40 PPMV AS CARBON @ 15% O₂, RULE 1110.2
METHANE: 3000 PPMV @ 15% O₂, RULE 1150.1
NO_x: 36 PPMV @ 15% O₂, RULE 1110.2
CO: 2000 PPMV @ 15% O₂, RULE 1110.2
PM: RULE 404, SEE APPENDIX B FOR EMISSION LIMITS

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, COATING EQUIPMENT, PORTABLE, ARCHITECTURAL COATINGS.

Periodic Monitoring:

1. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

FOR ARCHITECTURAL APPLICATIONS WHERE NO THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN SEMI-ANNUAL RECORDS OF ALL COATINGS CONSISTING OF (a) COATING TYPE, (b) VOC CONTENT AS SUPPLIED IN GRAMS PER LITER (g/l) OF MATERIALS FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS SUPPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT, FOR OTHER COATING.

FOR OTHER ARCHITECTURAL APPLICATIONS WHERE THINNERS, REDUCERS, OR OTHER VOC CONTAINING MATERIALS ARE ADDED, MAINTAIN DAILY RECORDS FOR EACH COATING CONSISTING OF (a) COATING TYPE, (b) VOC CONTENT AS APPLIED IN GRAMS PER LITER (g/l) OF MATERIALS USED FOR LOW-SOLIDS COATINGS, (c) VOC CONTENT AS APPLIED IN g/l OF COATING, LESS WATER AND EXEMPT SOLVENT, FOR OTHER COATING.

[RULE 3004 (a) (4)]

Emissions And Requirements:

2. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

VOC: RULE 1113, SEE APPENDIX B FOR EMISSION LIMITS
VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS

FACILITY PERMIT TO OPERATE NM COLTON GENCO LLC

RULE 219 EQUIPMENT

Equipment Description:

RULE 219 EXEMPT EQUIPMENT, HAND WIPING OPERATIONS.

Emissions And Requirements:

1. THIS EQUIPMENT IS SUBJECT TO THE APPLICABLE REQUIREMENTS OF THE FOLLOWING RULES AND REGULATION:

VOC: RULE 1171, SEE APPENDIX B FOR EMISSION LIMITS